

Claims

1. A lead-free solder comprising 5 - 10 mass percent of Zn, a total of 0.005 - 1.0 mass percent of at least one substance selected from the group consisting of Au, Pt, Pd, Fe, and Sb, a total of 0 - 15 mass percent of at least one substance selected from Bi and In, and a remainder of Sn.

2. A lead-free solder as claimed in claim 1 including a total of 0.01 - 0.7 mass percent of at least one substance selected from the group consisting of Au, Pt, Pd, Fe, and Sb.

3. A lead-free solder as claimed in claim 1 including a total of 0.5 - 12 mass percent of at least one substance selected from the group consisting of Bi and In.

4. A solder paste formed by mixing a powder of a lead-free solder as claimed in any of claims 1 - 3 with a flux component.

5. A solder paste as claimed in claim 4 wherein the flux component is a rosin flux.

6. A solder paste as claimed in claim 5 wherein the rosin flux contains a halide.

7. A soldered article having a soldered portion which is soldered by a lead-free solder as claimed in any of claims 1 - 3.

8. A soldered article as claimed in claim 7 wherein the soldered article is a printed circuit board having an electronic part mounted thereon by soldering.

9. A soldered article as claimed in claim 8 wherein at least one of the
5 electronic part and the printed circuit board has a soldered portion made of Cu.